

United States Patent [19]

Tobinick

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[54] **APPARATUS AND METHOD EMPLOYING LASERS FOR REMOVAL OF HAIR**

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[*] **Notice:** This patent is subject to a terminal disclaimer.

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[52] **U.S. Cl.** **606/9; 606/10; 606/16; 606/19**

[58] **Field of Search** **606/2, 3, 9, 10, 606/11, 12, 13, 16, 17, 18, 19**

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[57] **ABSTRACT**

A laser apparatus for permanently removing a plurality of hair follicles or blood vessels from the skin of a patient. The laser apparatus includes a housing having first and second lasers contained therein for emitting at least first and second pulses of coherent light energy; first and second fiber optic bundles connected to the first and second lasers, respectively, for transmitting the pulses of coherent light energy from the first and second lasers; the first and second fiber optic bundles connected to a common fiber optic bundle for combining and transmitting at least first and second pulses of coherent light energy from each of the first and second lasers through the common fiber optic bundle; and a sequence control device for controlling the first and second lasers to emit at least first and second pulses of coherent light energy either sequentially or simultaneously, with a time delay of less than 100 milliseconds between the sequential pulses from the first and second lasers. The laser apparatus further includes a handpiece for holding a section of the common fiber optic bundle in order to direct at least first and second pulses of sequential or simultaneous pulses of coherent light energy from the first and second lasers to a selected spot of the patient's skin to remove a plurality of hair follicles or blood vessels. In an alternate embodiment, other optical delivery systems may be employed, such as an articulated laser arm assembly.

40 Claims, 11 Drawing Sheets

